SPECIAL REPORT

Secret Warnings About Wuhan Research Predated the Pandemic

A series of previously unreported alarms and clashes over US-funded research in China reveal long-standing friction between two groups of government scientists: those who prioritize international collaboration, and those who are kept up at night by the idea that cutting-edge technologies could end up in the wrong hands.

BY KATHERINE EBAN

ILLUSTRATION BY ISABEL SELIGER

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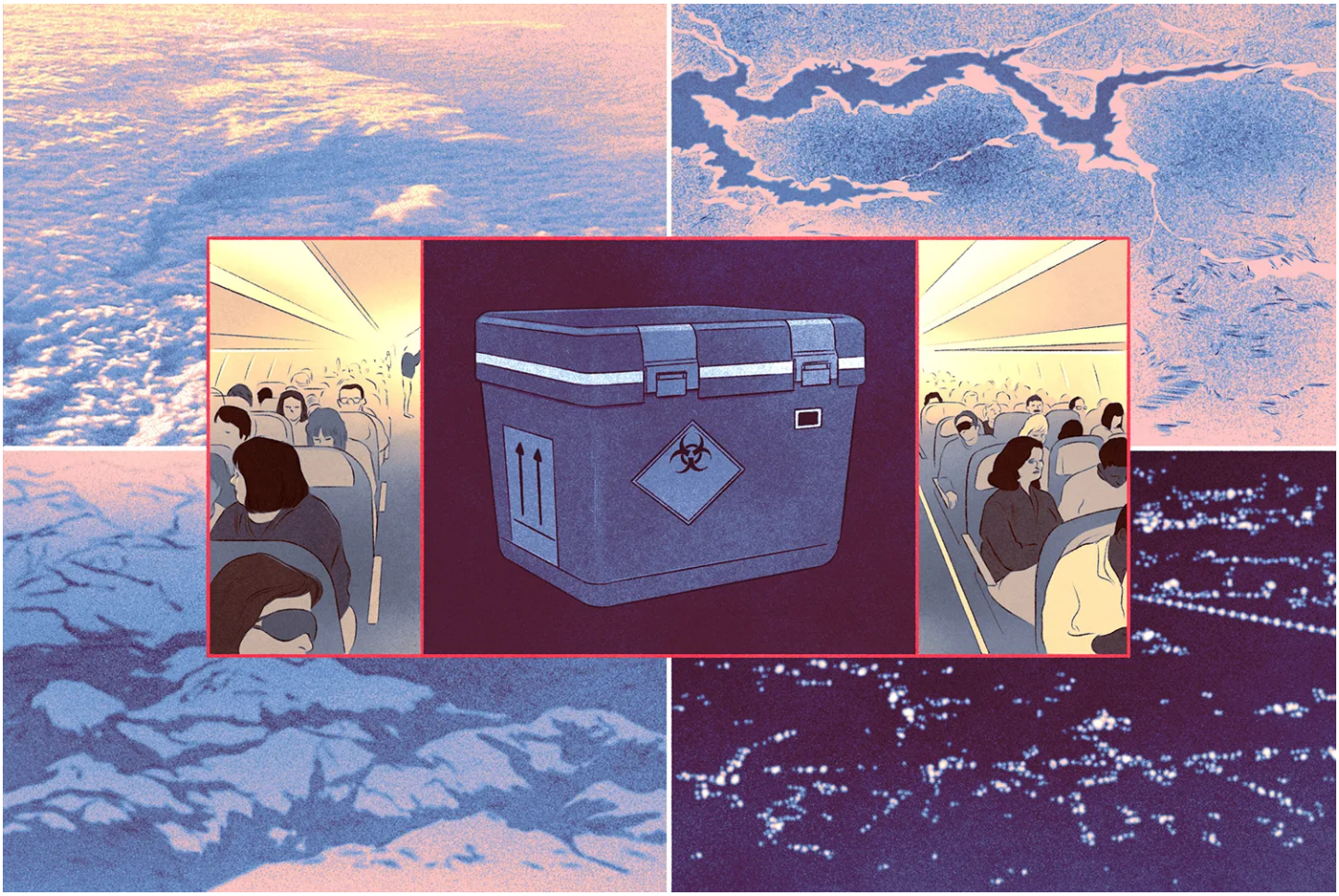


A March 2019 Air Canada flight out of Toronto Pearson International Airport carried a box with 24 vials of Ebola samples bound for the Wuhan Institute of Virology. ILLUSTRATION BY ISABEL SELIGER.

“Delete That Comment”

In late October 2017, a US health official from the National Institute of Allergy and Infectious Diseases (NIAID) arrived at the Wuhan Institute of Virology for a glimpse of an eagerly anticipated work in progress. The WIV, a leading research institute, was putting the finishing touches on China’s first biosafety level 4 (BSL-4) laboratory. Operating with the highest safeguards, the lab would enable scientists to study some of the world’s most lethal pathogens.

The project had support from Western governments seeking a more robust partnership with China’s top scientists. France had helped design the facility. Canada, before long, would send virus samples. And in the US, NIAID was channeling grant dollars through an American organization called EcoHealth Alliance to help fund the WIV’s cutting-edge coronavirus research.

That funding allowed the NIAID official, who worked out of the US embassy in Beijing, to become one of the first Americans to tour the lab. Her goal was to facilitate cooperation between American and Chinese scientists. Nevertheless, says **Asha M. George,** executive director of the Bipartisan Commission on Biodefense, a nonprofit that advises the US

government on biodefense policy, “If you want to know what’s going on in a closed country, one of the things the US has done is give them grant money.”

In emails obtained by *Vanity Fair,* the NIAID official told her superiors what she’d gleaned from the technician who’d served as her guide. The lab, which was not yet fully operational, was struggling to develop enough expertise among its staff—a concern in a setting that had no tolerance for errors. “According to [the technician], being the first P4 [or BSL-4] lab in the country, they have to learn everything from zero,” she wrote. “They rely on those scientists who have worked in P4 labs outside China to train the other scientists how to operate.”

She’d also learned something else “alarming” from the technician, she wrote. Researchers at the WIV intended to study Ebola, but Chinese government restrictions prevented them from importing samples. As a result, they were considering using a technique called reverse genetics to engineer Ebola in the lab. Anticipating that this information would set off alarm bells in the US, the official cautioned, “I don’t want the information particularly using reverse genetics to create viruses to get out, which would affect the ability for our future information gain,” meaning it would impair the collaboration between NIAID and the WIV.

> “I was shocked to hear what he said [about reverse engineering Ebola]. I also worry the reaction of people in Washington when they read this.”

There was good reason to fear that such a revelation could derail the fledgling partnership. One year earlier, the US Department of Energy had warned other agencies, including NIAID’s parent entity, the National Institutes of Health (NIH), that advanced genetic engineering techniques could be misused for malign ends. The Energy Department had developed a classified proposal, reported on here for the first time, to ramp up safeguards against that possibility and develop tools to better detect evidence of genetic engineering. The proposal, which was not implemented in its suggested form, prompted a heated interagency battle, six people with knowledge of the debate tell *Vanity Fair.*

On January 10, 2018, as the NIAID official prepared her official trip report for the US embassy in Beijing, she wrote to colleagues, “I was shocked to hear what he said [about reverse engineering Ebola]. I also worry the reaction of people in Washington when they read this. The technician is only a worker, not a decision maker nor a [principal investigator]. So how much we should believe what he said?” She concluded, “I don’t feel comfortable for broader audience within the government circle. It could be very sensitive.”

Among the recipients of that email was **F. Gray Handley,** then NIAID's associate director for international research affairs. Handley agreed with the official's assessment and advised her: "As we discussed. Delete that comment."

On January 19, the US embassy in Beijing issued a sensitive but unclassified cable that included concerning details from the NIAID official's tour. It said that WIV scientists themselves had noted the "serious shortage of appropriately trained technicians and investigators needed to safely operate" the lab, according to an unredacted copy obtained by *Vanity Fair.* But the cable did not include the information that her NIAID colleagues apparently found most worrying.

For synthetic biologists, the idea of engineering Ebola isn't seen as particularly unusual. Reverse genetics, using the CRISPR gene editing technology developed roughly a decade ago, is now a widely used laboratory technique. And the WIV's BSL-4 laboratory was designed to safely research Ebola, be it natural or man-made. Some scientists argue that, for research purposes, it can be safer to make a deadly pathogen in-house than to risk transporting it.

But the NIAID official feared that the WIV's training and staffing challenges, combined with its apparent interest in reverse engineering Ebola, would spark alarm, she recently told congressional investigators. The fatality rate in some Ebola outbreaks has reached well over 50%. "When it comes to headlines, and people spouting blood from every orifice, Ebola is about as bad as it gets," says **Kevin Esvelt,** an MIT biologist. (In the past few years, several Ebola vaccines have been approved.)

According to Stanford microbiologist **David Relman,** the risks of the WIV producing something new or unknown may have driven the government's concern. "When you are reverse engineering Ebola, you have now established a platform from which you can do 1 million different things with Ebola, or something that you call Ebola," he says. "It means you can now make any variant or construct that is Ebola-like at will."

Any effort to shield the technician's Ebola remarks from wider scrutiny within the federal government would be "a dereliction of responsibility," says **Gerald Parker,** former commander of the US Army Medical Research Institute of Infectious Diseases (USAMRIID).

VF has agreed not to name the NIAID official at the request of an NIH spokesperson, who raised concerns for her safety. The spokesperson said that the visiting official "took appropriate steps to ensure that officials at NIAID, HHS, and US Embassy Beijing were aware of the technician's comment via her report on the visit." When asked, however, the spokesperson was unable to provide evidence that the internal report describing the Ebola remarks was shared with the embassy. The State Department did not respond to a request for comment.

Some view ongoing questions about biosafety at the WIV as part of a Republican campaign to discredit **Anthony Fauci,** who led NIAID for 38 years, and to attack science more broadly. But US government warnings about scientific collaborations in autocratic countries predate the pandemic and cut across partisan lines. Concerns flagged in the Obama administration persisted through the Trump administration and are being examined today. "The administration is actively engaged in a process, incorporating input from all relevant federal agencies" to "evaluate and update biosafety and biosecurity policies," an official in President **Joe Biden**'s White House told *Vanity Fair.*

> "There's a dark side" to certain research, says Jason Paragas. "Just because you're doing it to publish a paper doesn't mean no one is going to do anything bad."

A six-month investigation by *VF* has found an almost decade-long trail of warnings issued by the Department of Energy to other government agencies, including the NIH, concerning the risk that US-funded biology research could be misused by overseas partners. In mid-2019, an Energy Department official went so far as to issue a specific warning to NIAID about the coronavirus research the agency was funding at the WIV.

"Serious Security Concerns"

Operating out of a sprawling 300-acre campus in Bethesda, Maryland, the National Institutes of Health describes itself as "the federal focal point for health research." Each year it makes more than 50,000 grants, distributing the majority of its $48 billion budget to researchers in the US and around the world. Among its 27 institutes and centers is NIAID, which distributed $5.3 billion in the 2023 fiscal year alone.

For the NIH and its grantees, global collaboration and transparent data sharing are synonymous with scientific progress. Even a trickle of grant money to a foreign lab can pay dividends. It can give US researchers access to new environments and viruses, and help build

trust that may elude bickering governments. “It is almost always beneficial to exchange ideas and samples with other countries, particularly those with different climates than our own,” says **Marc Lipsitch,** a professor of epidemiology at the Harvard T.H. Chan School of Public Health. “I don’t see why science funding should be reserved for friendly countries.”

But within the federal government, there is a different world of scientists: those tasked with anticipating threats to national security. In the open exchange of cutting-edge research with scientists in autocratic countries, they see the risk that science that serves the public good could be misappropriated to cause harm—a phenomenon known as dual-use research of concern. Worries about dual-use research have only grown with the easy accessibility of DNA-editing tools. Those technologies have opened the door to miraculous treatments, such as using gene editing to reduce cholesterol and protect against heart disease. But “there’s a dark side” to certain research, says **Jason Paragas,** former director of innovation at the Lawrence Livermore National Laboratory in California. “Just because you’re doing it to publish a paper doesn’t mean no one is going to do anything bad.”

Lawrence Livermore is one of 17 national laboratories overseen by the Department of Energy, a science and technology agency with strong intelligence capabilities, a number of whose scientists regularly review classified threats. “They spend their time in a dark world, faced with the nastiness of what could go on,” says **Diane DiEuliis,** a distinguished research fellow at National Defense University. Sometimes they flag concerns for scientists who, given their focus on open research, are “not willing to even contemplate what they’re talking about.”

Vanity Fair’s investigation reveals that in the months and years leading up to the pandemic, officials at the NIH and the DOE repeatedly locked horns over issues related to global scientific collaboration. DOE officials warned their NIH counterparts about national security risks posed by gene editing and its possible uses by hostile foreign adversaries, including China.
DOE officials issued their most specific warning in mid-2019, just months before the pandemic began, *Vanity Fair* has learned. Deputy Energy Secretary **Dan Brouillette** alerted a top Fauci adviser that the coronavirus research the US was helping to fund at the WIV risked being misappropriated for military purposes. Based on classified threat assessments, and concerns raised by DOE scientists, Brouillette urged NIAID to use caution in its collaborations with Chinese government scientists. His warning should have served as a red flag for any research the agency was conducting with China, say two sources with knowledge of the exchange.

A spokesperson for NIAID said, “We are not aware of this interaction.” A spokesperson for Fauci, who has advised seven presidents on infectious disease policy and championed expanded treatment options for HIV and AIDS, said he was unavailable to respond to questions.

Vanity Fair interviewed more than 60 people for this account. The Republican-led Select Subcommittee on the Coronavirus Pandemic, which has been holding hearings and issuing subpoenas as part of its investigation into COVID-19's origins, provided the emails between the visiting NIAID representative and her agency colleagues. *VF* obtained dozens of previously undisclosed government records from other sources.

Though the DOE and the NIH have partnered on historic endeavors, from the Human Genome Project to the Cancer Moonshot, they've also battled over what restrictions, if any, should be placed on technologies that allow scientists to synthesize and edit DNA. "We came at it from the point of view, 'There are serious security concerns,'" **Ernest Moniz,** who served as DOE secretary under **Barack Obama,** tells *Vanity Fair.* "Our view was always, 'We have to address them in ways that do not unduly restrict basic science.' But what is the meaning of 'unduly'? There lies the entire matter." In meetings during the final months of the Obama administration, the longtime head of the NIH, Francis Collins, dismissed such risks as "science fiction," according to several people present.

In the last days of the Obama administration, NIH director Francis Collins said at a contentious White House meeting that a DOE threat assessment "reads like a movie script." ILLUSTRATION BY ISABEL SELIGER.

The clash between these two scientific worldviews—and related debates over how to collaborate with an advanced institute like the WIV, in an autocratic country hostile to Western interests—is hardly contained to the US. In Canada, a government lab's decision to ship Ebola samples to the WIV set off a scandal that resounded all the way to the office of Prime Minister **Justin Trudeau,** and played a role in the dissolution of parliament in the fall of 2021.

This history of conflict helps explain why the debate over COVID-19's origins, which remains unresolved, has been so fiercely argued among scientists. If you've spent your career collaborating with foreign scientists to identify animal viruses that could spill over to humans, the lessons of the pandemic likely look very different from how they would if you'd been kept awake by visions of lab-generated superviruses.

In response to detailed questions, a DOE spokesperson said the agency "leverages its national laboratory capabilities to analyze emerging and disruptive technologies, including foreign applications of biotechnology…that may impact our national security." She described the DOE's mission as "vastly different" from that of the NIH, but also noted its complementary nature. "DOE brings capabilities in technology that enable advances in NIH's mission, and NIH's needs spark innovations in DOE's capabilities." The spokesperson did not respond to questions about warnings issued by the DOE, or any of its officials, prior to the pandemic.

In June, the Office of the Director of National Intelligence (ODNI) issued a declassified report that provided a snapshot of perspectives on the COVID-19 origins question across America's intelligence agencies. According to the report, the DOE and the FBI believe the pandemic is most likely to have originated with a lab leak. The National Intelligence Council and four other agencies say the virus most likely spilled over from a natural host, and two others, including the CIA, say there isn't enough evidence to support one conclusion over the other.

All the intelligence agencies agree that SARS-CoV-2 was not developed as a bioweapon, the report said, and "almost all" agree it "was not genetically engineered." Three sources tell *VF* that DOE scientists, using an array of advanced tools and working out of several different labs, including Lawrence Livermore, Argonne, and Oak Ridge, could not rule out the possibility that the virus's sequence had been engineered.
The ODNI report also found that People's Liberation Army scientists sometimes worked out of WIV labs, and collaborated with its civilian scientists on biosecurity projects and coronavirus research to address public health needs.

The Chinese government encourages such intermingling with a policy called military-civil fusion, which aims to harness civilian scientific innovation to advance military goals.

The fundamental uncertainty over how the pandemic began has further inflamed a long-standing debate over what guardrails, if any, should be imposed on open science, and who should set them. Some scientists say these very questions endanger them at a time when expertise of all kinds is under attack and a rising tide of far-right hate has fueled a dangerous anti-vaccine movement.

These scientists argue that, with another pandemic likely in the near future due to climate change and human incursion into wild spaces, imposing restrictions on science could forestall crucial advances. "We should be accelerating our capacity for virological research," says **Peter Hotez,** codirector of the Texas Children's Hospital Center for Vaccine Development. "Instead, there is this sense that we have to contain the virologists, not the viruses. That's misguided,

that's dangerous. If you want to revisit biosafety, that's totally reasonable. But put the virologists in charge."

In the wake of the COVID-19 crisis, however, there is a growing call for stricter oversight of research deemed risky. "We put guardrails on nuclear science, and we did so after World War II," says a former Biden administration official who worked on biosecurity issues. But today, "if you have access to a $50,000 DNA synthesizer, you could produce a weapon that is as powerful as a hydrogen bomb."

"This Reads Like a Movie Script"

In 2011, a Dutch virologist named **Ron Fouchier** announced at a scientific conference that he'd genetically engineered what he'd later describe as "probably one of the most dangerous viruses you can make." He had altered the H5N1 avian influenza strain to make it transmissible among ferrets, which are genetically closer to humans than mice are. The experiment had been funded, in part, by the NIH.

Fouchier's announcement triggered an uproar over what's known today as gain-of-function research of concern—lab work that enhances the virulence or transmissibility of pathogens to help assess their threat to humans and develop countermeasures. Though the NIH has advocated for such research, others in the scientific community organized against it, arguing that creating pathogens that don't exist in nature runs the risk of unleashing them. The Dutch government initially blocked Fouchier from publishing his findings, for fear that they could serve as a how-to manual for bioterrorists.

Amid the controversy, the NIH assembled a high-level group, nicknamed the "ferrets committee," to advise it on the risks of funding such research. As one member of the advisory group recalled, "We were worried we could be in violation of the Biological Weapons Convention."

From 2009 to 2021, the NIH was led by the renowned geneticist Francis Collins, whose many achievements include discovering the gene that causes cystic fibrosis. In March 2012, Collins wrote an email to members of the ferrets committee in which he acknowledged, "I am not familiar with the Biologic and Toxic Weapons Convention. Can our crack legal staff offer any opinions on this question?" The Biological and Toxin Weapons Convention, enforced since 1975, is the most significant treaty that governs the development and use of biological agents.

In response, a staffer emailed her supervisor: "I can't believe he doesn't know what the BWC is???!!! yikes." The supervisor replied, "It shows you how different our worlds are."

> According to one attendee, NIH director Francis Collins was decidedly unimpressed with the DOE's threat assessment, and exclaimed with derision, "You got this out of a movie."

An NIH spokesperson, responding on behalf of Collins, said it was "inaccurate" to suggest that his email indicated "a total lack of knowledge of an issue." Officials have "different areas of expertise, and the point of meeting is to learn from each other to avoid blind spots in policy decisions."

The NIH revolutionized science through its work on the Human Genome Project, which sought to fully sequence the human genome. That landmark achievement, launched initially by the DOE in 1990 and completed in 2003 by an international consortium under Collins's leadership, committed the NIH to global collaboration and transparent data sharing. "Science goes faster, and the power of genomics is maximized, when you get larger and larger studies," says **Eric Green,** director of the NIH's National Human Genome Research Institute. "Share, share, share. That is the ethos of the genomic-research community."

By contrast, the Department of Energy has always been steeped in a world of threats. Born out of the top secret Manhattan Project to build an atomic bomb during World War II, it is responsible for designing and maintaining the US nuclear stockpile, and for using science and technology to address energy and environmental challenges. The DOE was also responsible for significant parts of the nation's biosecurity until after 9/11, when much of that mission was handed off to the newly created Department of Homeland Security.

As DOE scientists spent decades studying the impact of radiation on the human genome, they also developed advanced expertise in gene editing technology and its potential risks. The Lawrence Livermore National Laboratory houses the Biodefense Knowledge Center, an analysis hub that serves the federal government's national security community, and the Z Division, an intelligence unit whose specialties include biosecurity.
"Having come through the nuclear world, everything is born classified, and you understand the dual-use nature" of technology immediately, says **Dimitri Kusnezov,** who joined the DOE two days before 9/11 and served for 10 years as chief scientist of the National Nuclear Security Administration, which oversees all of the agency's nuclear weapons work.

In 2014, Lawrence Livermore scientists began raising concerns with Kusnezov and other DOE leaders about the national security threats posed by gene editing platforms such as CRISPR.

Among the issues they raised was the possibility that a foreign government could tailor biological agents to target specific ethnic groups.

Kusnezov, who is now the Department of Homeland Security's under secretary for science and technology, says of the concerns: "Now we have a technology platform that can potentially create things we have never seen before, splice things, have effects that could be new."

The US government closely monitors an evolving list of dangerous pathogens and their use in research, but the DOE was warning of a not-so-distant future in which dangerous pathogens might not be tracked because they've been enhanced or cooked up altogether in a lab, or a garage, or a trailer. In February 2016, that concern led the Office of the Director of National Intelligence to add genomic editing to its list of potential weapons of mass destruction, surprising a number of government scientists. As warnings resounded, the National Security Council convened meetings on countering biological threats.

Things came to a head at a contentious White House meeting in October 2016. The Department of Energy had followed up its threat assessment with a wide-ranging proposal to closely monitor the sale of genetic components and better detect evidence of genetic engineering. According to one attendee, the NIH's Collins was decidedly unimpressed, and exclaimed with derision, "You got this out of a movie. This reads like a movie script."

"Nobody really liked that," the attendee says.

Another attendee says Collins exhibited a "shocking" disregard for the national security experts in the room.

> "There is this sense that we have to contain the virologists, not the viruses," says Peter Hotez. "That's misguided, that's dangerous."

An NIH spokesperson said, "As a noted expert in human genome research, Dr. Collins was called upon to respond to certain scenarios of concern and expressed the view that some of them seemed overblown." She added, "Disagreeing on an opinion is not equivalent to dismissing it."

To skeptics in the health, science, and intelligence agencies, it looked like the DOE had painted an unrealistic doomsday scenario that, conveniently, would expand its own budget and turf. "It was more like you were reading a tale of fiction versus an intel product," recalls one

former federal health official. "'They have access to this sequence, therefore they could…' With no evidence that was being done. They created the problem by writing the intelligence assessment [and then said,] 'We can solve this.'"

Part of the skepticism came from the DOE's unusual structure. Going all the way back to the Manhattan Project, DOE laboratories have operated on the government-owned, contractor-operated—or GOCO—model. Under that structure, the government owns the labs and sets their priorities, but outside contractors employ the scientists. The system helps protect the researchers' political independence, but it also means the labs operate as freelancers that pitch themselves to other government agencies for new missions. Their quest for relevance and funding makes them the "ambulance chasers of our community," says a former US government official who worked on biosecurity policy.

The DOE plan was almost approved in the final days of the Obama administration, says Kusnezov, but then the Trump administration came in and "we lost momentum." Nevertheless, the work continued in modified form, and has been funded by Congress since 2019.

"I Have Some Concerns Here"

On the afternoon of March 31, 2019, Canadian health bureaucrats watched nervously as Air Canada flight AC031 took off from Toronto Pearson International Airport, headed to Beijing.

The passengers on board had no way of knowing about the plane's hazardous payload: a box with 24 vials of Ebola virus from 12 different strains, and six vials of highly lethal Henipaviruses, nestled amid 33 pounds of dry ice. The samples had come from the National Microbiology Laboratory in Winnipeg, Canada's only BSL-4 facility, and were bound for the Wuhan Institute of Virology.

The following day, Canadian officials received a grateful email from a WIV scientist: "DEAR ALL, the package has just arrived in Wuhan safely. We would like to express our sincere gratitude to you all for the continuous support…. Looking forward to our further cooperation in the future."

If Canadian officials breathed a sigh of relief, the feeling would not last. Within a year, members of Canada's parliament and the press would scrutinize their every decision, with questions swirling about a national security breakdown at Canada's top secret lab and emails surfacing in response to public record requests.

> On the day of the flight carrying Ebola samples, hazmat teams were on standby at the Toronto airport. Meanwhile, "people on Air Canada are not eating peanuts because *that* is too dangerous."

The trouble could be traced back to the same phenomenon that had so alarmed the visiting NIAID official in Wuhan: the WIV's fitful struggle to launch its Ebola research program. Stanford microbiologist David Relman had encountered the issue firsthand during one of his trips to China, when a WIV scientist told him they had not yet been able to obtain Ebola samples. "I said, 'What's the problem?' They said, 'It's our own government. They're being overly cautious or bureaucratic.'"

By May 2018, however, WIV scientists had settled on a path forward. One had reached out to a frequent collaborator at the Winnipeg lab, **Xiangguo Qiu,** to see if she could facilitate the sharing of samples. Originally from China, Qiu was a world-class Ebola researcher who had worked since 2003 at the lab's special pathogens program and had come to head its Vaccine Development and Antiviral Therapies section. That month, she and the former head of the Winnipeg lab, **Gary Kobinger,** had received a prestigious Canadian award for their development of an Ebola treatment called ZMapp.

Qiu's request to share Ebola samples bumped through the sleepy Canadian health bureaucracy, subject to oversight that was arbitrary at best. Even the Public Health Agency of Canada's director of biorisk and occupational safety services seemed bewildered when she explained to colleagues that, "when we try to get an export permit, we are told we don't need one."

Instead of demanding proof that the WIV was a certified BSL-4 lab, accredited to research Ebola, the presiding bureaucrats accepted a letter from a WIV official attesting to it. "I trust the lab and would be personally fine to sign off," one offered. But the Winnipeg lab's scientific director general responded, "I have some concerns here. No certifications are provided, they simply cite they have them. What is the nature of the work, and why are our materials required." He added, "Good to know that you trust this group. How did we get connected with them?"

As the transfer of samples proceeded, Canadian officials contending with arduous safety procedures in Toronto expressed hope the viruses would be routed through Vancouver instead. "Fingers crossed," one wrote to another. On the day of the flight, hazmat teams were on standby at the Toronto airport. Meanwhile, says **Amir Attaran,** a biologist and lawyer at the University of Ottawa who represented opposition members of parliament seeking answers,

"people on Air Canada are not eating peanuts because *that* is too dangerous." (Attaran is a member of Biosafety Now, a group working to increase oversight of gain-of-function research of concern.)

A spokesperson for the Public Health Agency of Canada said, "There is no international accreditation for containment level 4 facilities." Because of that, PHAC "reviews each request it receives" and will accept "an attestation from a biosafety officer" that a facility meets the necessary containment level. The spokesperson also said that the Winnipeg lab "followed the process as laid out in legislation and regulations." Air Canada did not respond to an email seeking comment.

The first inkling of trouble came four months later. On July 5, 2019, the Royal Canadian Mounted Police (RCMP) arrived at the lab. Qiu, her scientist husband, and several students from China working with them were marched out and had their security clearances revoked.

The RCMP had acted on a tip from a foreign intelligence service, it was later reported. What exactly that tip was, and whom it came from, remain unclear. At the time, however, the FBI was investigating the Chinese government's use of talent recruitment programs to obtain intellectual property and other sensitive data from Western labs.

In October 2017, a NIAID official who visited the Wuhan Institute of Virology was told about safety concerns and a possible plan to engineer Ebola in the lab. ILLUSTRATION BY ISABEL SELIGER.

In late May of that year, a scientist at the Los Alamos National Laboratory in New Mexico was arrested after he lied about taking grant money from China's Thousand Talents program. Weeks later, the DOE issued a directive prohibiting lab employees and contractors from participating in, or taking money from, foreign talent programs. According to a former DOE official, officials there had grown concerned that the Chinese government was using information drawn from US labs to bolster its efforts to develop biological weapons.

Once COVID-19 struck, questions about what had transpired at the Winnipeg lab erupted in parliament and the Canadian press. Troubling reports emerged: that two Chinese military scientists had received security clearances and accessed the lab, in violation of rules that restricted access to only citizens of Canada and its close allies; and that Qiu, a frequent visitor

to the WIV, had collaborated with a top scientist from the People's Liberation Army, Major General **Chen Wei.** It was also reported that the RCMP was investigating whether plasmid DNA from the Winnipeg lab, typically used to help create viruses or vaccines, had been shared with the WIV without authorization.

Vanity Fair has obtained records indicating that the RCMP is probing whether sensitive lab materials, including the plasmid DNA molecules, were sent to the WIV as emergency after-hours shipments, in a manner that circumvented the Winnipeg lab's official records system. Other records indicate that a number of foreign students assisting with research at the University of Manitoba were granted access to even the most restricted parts of the lab, despite not being eligible for full security clearances.

An RCMP spokesperson said its investigation is "ongoing," adding, "National security criminal investigations are often complex, multijurisdictional, and resource intensive, and can take several years to complete."

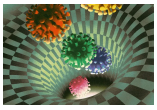
Why did the WIV need so many different Ebola samples, asks Attaran, and what was it researching? "If your goal is to perform Shakespeare, all you need is a copy of *Taming of the Shrew,*" he says. "If your goal is to *be* Shakespeare, you better have all the plays and the sonnets too. This was China acquiring every last sonnet Winnipeg had created. It's undoubtedly genetics research," he continues. "What's the ultimate reason? I don't know."

More Reporting by Katherine Eban

INVESTIGATION

"This Shouldn't Happen": Inside the Virus-Hunting Nonprofit at the Center of the Lab-Leak Controversy

BY KATHERINE EBAN



VIRAL INFLECTION

The Lab-Leak Theory: Inside the Fight to Uncover COVID-19's Origins

BY KATHERINE EBAN

CORONAVIRUS

"That's Their Problem": How Jared Kushner Let the Markets Decide America's COVID-19 Fate

BY KATHERINE EBAN

As opposition parties in parliament, from Conservatives to the far left, demanded answers, the Trudeau government defied a House of Commons order to produce documents. Instead, it took the unprecedented step of suing the House Speaker to block disclosures, claiming that national security was in jeopardy. It then dissolved parliament and called for new elections, thereby voiding the order and forcing opposition parties to start again. Today, under a compromise, four members of parliament are reviewing documents related to the case under the supervision of a three-judge panel.

"It's clear there were major national security breaches at the government's top-level lab in Winnipeg, and the Trudeau government has gone to extraordinary lengths to try and hide what happened," says **Michael Chong,** a prominent Conservative lawmaker who himself was a target of a disinformation campaign by the Chinese government.

The minister of health's office wrote, "All opposition parties, including the Conservatives, have full and unredacted access to all documents pertaining to the Winnipeg Lab."

Today, Qiu is listed as a "mentor" at the University of Science and Technology in the city of Hefei in eastern China. She is also listed as a co-inventor on two patent applications submitted by the WIV this June, for Nipah virus antibodies. She has not been charged with any crime by Canadian officials. In China, the *Global Times,* a state media outlet, attributed her dismissal from the lab to geopolitical score-settling. Numerous efforts to reach Qiu by email and phone were unsuccessful.

"Unacceptable Outcomes"

After the first SARS outbreak, in China in 2002, the country experienced a surge of scientific goodwill. Though governmental relations may have been rocky, scientists from numerous countries worked together on coronavirus research.
"Everyone knew China was a dictatorship, but we thought it looked like they revamped their disease-reporting system. Finally we have a meaningful way to collaborate," says **Gerald Epstein,** who served as assistant director for biosecurity and emerging technologies at the White House Office of Science and Technology Policy under President Obama. "But all that evaporated."

As the COVID-19 pandemic began, the Chinese government suppressed early-case data, muzzled its own scientists, and limited international fact-finding missions into its origins.

Today, that conduct, along with the dispute over COVID-19's origins, has forced a broader reckoning. "As scientists, we all collaborate, but that *Leave It to Beaver* '50s stuff isn't true

anymore," says **Phil Ferro,** who served as the director for countering biological threats at the National Security Council under Trump. "We need policies in place to protect the interests of this country."

In October 2020, *VF* has learned, Dan Brouillette told Fauci that DOE scientists had found evidence suggesting that the pandemic had originated at the WIV. By then, Brouillette had risen from deputy secretary to secretary of the DOE, and he offered to share his department's laboratory resources and computing capacity with the NIH.

Brouillette was later found to have violated the Hatch Act after saying on a Fox News radio program that then candidate Biden, whom he did not name, was likely to restrict oil and gas drilling on federal lands. But he was also credited with helping to stabilize oil markets early in the pandemic, and he promised a "smooth transition" to the Biden administration in the wake of the January 6 insurrection.

In early 2023, it was reported that the DOE had formally changed its view on the pandemic's origins from undecided to assessing, with low confidence, that the virus had originated from a lab. A source with knowledge of the DOE's investigation tells *VF* that the agency had long been more confident in its scientific analysis, and only later became more comfortable with the intelligence supporting it.

According to CNN, the change was prompted by new intelligence related to a coronavirus variant being studied by China's Center for Disease Control in Wuhan. It's unclear whether the Chinese CDC's research is linked to the WIV.
In early 2021, the Biden administration embarked on a broad review of biosecurity safeguards. According to the former Biden staffer who worked on these issues, White House officials have grown "deeply skeptical" that the current approach to evaluating certain scientific research risks has been sufficient. "The destructive potential of biology is deserving of more careful risk assessment," the former staffer says.

There is heated debate over what rules should govern gain-of-function research, and whether existing guidelines are sufficient or adequately followed. Since 2017, federal rules have required certain research involving the genetic modification of viruses to undergo a special agency review. The Biden administration found that the risk assessments were largely being performed by the institutes seeking the grants themselves, according to documents reviewed by *Vanity Fair.*

In the last six years, only three research projects have passed through a Health and Human Services (HHS) review committee. One was a proposal by University of Wisconsin–Madison virologist **Yoshihiro Kawaoka** to infect ferrets with a genetically modified strain of the deadly

H5N1 bird flu. A risk-benefit analysis by a University of Wisconsin–Madison committee, obtained by *Vanity Fair,* acknowledged the risks bluntly: “Influenza does not discriminate so that the risks of a pandemic would not discriminate…. This type of research has the potential for significantly greater risk if someone were to misuse the published information, there was a laboratory accident, or a deliberate release of agent.”

Nevertheless, the university committee concluded that the benefits outweighed the risks, and an HHS review committee approved the research in March 2019. “There was no authority given to me or my organization to demand a more rigorous review,” says **Robert Kadlec,** who ran the HHS review committee for several years. The grant applicants “grade [their] own homework, literally.”

Nine months after the grant was approved, there was a close call at Kawaoka’s lab, with a trainee’s airflow hose being briefly disconnected during an experiment involving ferrets exposed to the virus.

The incident was first reported in a recent book, *Pandora’s Gamble.* A spokesperson for the University of Wisconsin–Madison said after it was published that the lab has a “stellar safety record and history of strong accountability.” Reached for comment, another spokesperson told *VF* that, after performing important work that “improved how lifesaving flu vaccines are produced,” the lab has now shifted its focus away from H5N1.
Even some scientists who advocate for unrestricted global collaborations argue that research to enhance risky pathogens should be more closely regulated. “In the long run, public support for science will deservedly suffer if scientists are taking risks without commensurate benefit,” says the epidemiologist Marc Lipsitch.

In January, a report issued by the National Science Advisory Board for Biosecurity advised the NIH to strengthen and broaden its oversight of research that could be risky or subject to misuse. That report, coupled with the ongoing White House review and scrutiny by Republicans in Congress, has led to a recalibration across a number of federal agencies.

In late June, the Department of Defense issued new guidelines to prevent the research it funds from being “misappropriated” overseas. The guidelines call for “risk-based security reviews” of proposed research that involves “foreign countries of concern,” including China and Russia. The DOD also warns against engaging with researchers or institutions with military links, including China’s Academy of Military Medical Sciences and its subsidiaries.

In July, USAID, a federal agency that works to promote global health, canceled a $125 million program called DEEP VZN, which planned to sample wildlife in remote locations and identify viruses that could pose a pandemic threat. According to another former Biden administration

official, the program was nixed because such research "poses objective risks" that are not offset by its benefits.

Despite vocal opposition from scientists, the NIH is now requiring overseas collaborators to share their lab notebooks and raw data with principal grant recipients at least once a year. The requirement is an "insult" to foreign collaborators and will "diminish collaboration with the US," says **Robert Gallo,** cofounder and emeritus director of the Institute of Human Virology at the University of Maryland School of Medicine. "We'll look like the jackasses of the world."

An NIH spokesperson said that the agency has a long-standing policy of requiring principal grant recipients to have access to collaborators' records.

Perhaps most notably, in July the US Department of Health and Human Services blocked the WIV from receiving federal funds for a decade. The letter announcing the decision cited an NIH-funded experiment there that created a coronavirus with enhanced virulence. Although the coronaviruses known to have been used in the research were too distant to have caused the pandemic, the letter states that the experiment nevertheless violated federal policies and "possibly did lead or could lead to health issues or other unacceptable outcomes."

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The letter concludes that, due to the WIV's failure to provide records, there is a risk that the lab "not only previously violated, but is currently violating, and will continue to violate, protocols of the NIH on biosafety."

The impact of the distrust has been a loss for science, says **James LeDuc,** former director of the Galveston National Laboratory in Texas, which helped train several of the WIV scientists. "Unfortunately, we've had a blackout on all communications, and that's a tragedy. The politics have made it very, very difficult."

But current politics may account for only part of a larger shift in how science calibrates risk. This "feels very 1930s to me, when atomic science was reaching a point of sufficient sophistication as to become perilous," says Amir Attaran, the University of Ottawa biologist and lawyer. An array of governments "all understood perfectly well that the nature of the research they were undertaking was weaponizable." But they encouraged collaboration anyway, even

with German scientists who had joined the Nazi Party, “in the interests of collecting knowledge. The folly of that became quickly, clearly known.”

To Attaran, this helps explain what happened at the WIV in the run-up to the pandemic. “The French had a stake. The US had a stake,” as did the Canadians. “They felt the benefits of global collaboration were sufficient—until suddenly they were not.”

Additional reporting by Katherine Li and research by Stan Friedman.

This story has been updated.

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